PP-005 **An analysis on the rational application of antibiotics in the department of gastrointestinal surgery**

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Objective: To realize the circumstances of the antibiotic application during perioperational period, the rational application of antimicrobial agents was evaluated in the department of gastrointestinal Surgery in a hospital.
Methods: Retrospective study for 210 patients in the department of gastrointestinal Surgery form Jan. 2007 to Dec. 2008 was carried out at random.
Results: The antibacterial agents were used in all patients during perioperation; The antibacterial agents used most frequently were Metronidazole and Cephalosporins, The combined use cases were 90.5%. The average period of treatment was 7 days. The incidence of surgical site infection was 8.6%. Only 55.6% patients' samples were examined and drug susceptibility test were detected.
Conclusion: The irrational applications of prophylactic antibiotitcs during the perioperative period are serious, such as the average time of using antibiotics was too long, unreasonable frequently sort changing and low rate for samples detecting.

PP-006 **Resistance to phenoxymethylpenicillin (penicillin V) in bacteria causing paediatric infections in European countries**

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In paediatrics, penicillin V has been primarily used for the treatment of ear, nose and throat infections, lower respiratory tract infections, skin and soft tissue infections. Penicillin V is less potent than benzylpenicillin (penicillin G). Resistance mechanisms in bacteria towards penicillin V and G are similar. Three major groups of bacteria involved as causative agents in paediatric diseases are: *Streptococcus pyogenes*, *Streptococcus pneumoniae* and *Haemophilus influenzae*. According to the published articles, current resistance situation for penicillin (V and G) in Europe for above-mentioned bacteria can be summarised as follows:

- *S. pyogenes:* Penicillin-resistant *S. pyogenes* has never been observed to date.
- *S. pneumoniae:* Penicillin non-susceptibly shows a heterogeneous picture in Europe:
  Norway, Sweden, UK, the Netherlands and Germany had low levels of non-susceptibility (<5%),
  Moderate levels of non-susceptible strains in Belgium, Finland, and Ireland,
  High levels of penicillin non-susceptible *S. pneumoniae* above 25% were mainly reported from Southern and Eastern Europe: Cyprus, France, Poland, Romania and Turkey.
  The prevalence of non-susceptibility to penicillin seems to be declining (with more than 10%) in the high-prevalence area, e.g., France and Spain.
- *H. influenzae:* An increasing isolation rate of resistant strains has been reported since the emergence of beta-lactamase producing *H. inflenzae* in 1974. There is insufficient evidence that *H. influenzae* is a good target for therapy with the penicillin V. The wild type distributions of MIC values given in the EUCAST database suggest that there may be only one resistant population of *H. influenzae*. Thus, it can be speculated that this pathogen may harbour inherent resistance.

Conclusions: Penicillin V is still drug of choice for treatment of *S. pyogenes*, but its activity has been reduced significantly for *S. pneumoniae* and *H. influenzae* in the last three decades.

PP-007 **Difference in epidemiology and antibiotic susceptibility of methicillin resistant and methicillin susceptible *Staphylococcus aureus* isolates**

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Objectives: Antimicrobial resistance of *Staphylococcus aureus* especially methicillin resistant *S. aureus* (MRSA) continues to be a problem for clinicians worldwide. Although difference in epidemiology and antibiotic susceptibility of methicillin resistant *S. aureus* and methicillin susceptible *S. aureus* (MSSA) isolates has been proposed by investigators, few data have been reported to now.
Methods: Disk diffusion method was used for determination of *in-vitro* susceptibility of *S. aureus* isolates to 15 antibiotics. Susceptibility pattern of 192 non-duplicates *S. aureus* isolated from clinical specimens in four university hospital in Tehran, from November 2007 to August 2008, were compared. In addition, distribution of MRSA and MSSA isolates were investigated in different specimens, on various wards, and in different age groups.
Results: MRSA isolates were constituted 49% of all isolates. While only 1.7% of the MSSA isolates were multidrug resistant, all of MRSA were shown resistance to at least five antibiotics. Majority of isolates from patients $\geqslant$65 years old were MRSA and prevalence of methicillin resistance was highest among *S. aureus* isolated from respiratory specimens. Also, MRSA appeared to be more prevalent in intensive care units and operation wards than in other departments.
Conclusion: This study has shown a relationship between methicillin resistance and resistance to other antibiotics in *S. aureus* isolates. Also, considerable differences were observed in epidemiology of MRSA and MSSA isolates.

PP-008 **Surveillance of antimicrobial resistance in infectious diseases hospitals in Romania**

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Background: Antimicrobial resistance data could improve the quality of local treatment guidelines in various infectious diseases. We started a surveillance study to evaluate the level of resistance in four infectious diseases hospitals from Romania.
Methods: A four-center (Infectious Diseases Hospitals from Iasi, Constanta, Timisoara and National Institute Matei Bals) retrospective study of bacterial antimicrobial susceptibility was performed over a twelve month period (July 2008–June 2009).
Results: We analysed 3995 bacterial isolates, duplicates and bacteria isolated from feces being excluded. More than half of the tests were performed in the "Matei Bals" National Institute (52.26%). 56.32% of the results were obtained using the disk diffusion method.
High levels of resistance were noted for *Streptococcus pneumoniae*, with diminished susceptibility for penicillin